

Application No. 10/077,730

Docket No.: 83180US1

Amendment dated September 30, 2005

Reply to Office Action of June 1, 2005

REMARKS/ARGUMENTS

Claims 1-25 are present in the application. No claims have been canceled or added by the present Response. Claims 1, 2, 4, 10, 11, 19, 20, and 23 have been amended to address the stated objections, and applicant believes the objections have been overcome. The rejections will now be addressed.

The Rejections under 35 USC § 103 (a)

Claims 10, 11, 19, and 23 were rejected under 35 USC § 103 (a) as being unpatentable over Nease and in further view of Patel et al. The rejection is respectfully traversed.

Although the Office Action states on p. 4, last line, that Nease discloses that the output (i.e. of the bandpass filter) is converted by an analog to digital converter to create a digitized output (output 120), applicant disagrees. Nease shows no "digitized output" in the figures. Instead, there is a "Level-Controlled IF Output to Analog-to-Digital Converter". Nease therefore does not actually disclose the ADC, but merely makes passing references to analog to digital conversion. Nease makes no mention of sampling as in the context of the present invention, and when referring to ADC refers just to output, not to sampling or to analog to digital conversion.

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The Office Action also acknowledges at p. 5 that Nease fails to disclose the signal first being digitized and then used for gain control, but then goes on to say that it would be obvious to one skilled in the art that the digitizing of the signal before using said signal for gain control is not a significant design choice from digitizing the signal after gain control signals are derived. Applicant disagrees with the rejection on two grounds. First, this is a significant design choice, in that it eliminates the need for traditional analog peak detectors by accomplishing these functions digitally. Second, the Office Action has provided no basis in the art for this rationale, and applicant observes that the Examiner is obligated not to apply rejections in the abstract but rather to articulate a rejection substantiated by reference to an independent, outside source, not just essentially applying a rejection as falling within the Examiner's own personal knowledge or opinion.

This is further evidenced by the assertion at p. 5 of the Office Action that applicant fails to disclose an advantage to digitizing the gain controlled signal prior to providing a gain control signal. This assertion is incorrect, as the present application does disclose its advantages. For example, at p. 2, lines 29-35 of the specification, it states that a typical radar signal consists of bursts of RF energy (pulses) that vary greatly in amplitude with the rotation of the transmitter antenna. The invention allows the intercept system signal processor to adjust for these changes in amplitude, thereby

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maintaining acceptable signal amplitude at the ADC. The radar signal environment typically contains multiple signals varying independently in amplitude, and the invention is capable of functioning well in this environment. The second part of the sentence in the Office Action, that "therefore it would be obvious to one skilled in the art at the time of invention to use the digitized version of the signal for gain control in the automatic gain control circuit as disclosed by Nease", does not in any event, but especially in view of the above, follow so as to justify the rejection on these grounds.

The Office Action further applies Patel, asserting it discloses an automatic gain controlled circuit that uses the analog, as opposed to the digital, version of the signal. Applicant agrees, but asserts that this actually teaches away from digitizing unlike the invention in that Patel suggests just the analog approach. Also, whereas the Office Action goes on to state that the envelope detector and peak detector can be used to detect a pulse of a determined peak value to control the gain of the automatic gain control, applicant notes that Patel actually makes no reference to detecting pulses in a digitized data stream. Patel instead pertains to processing digital television signals which are quite different from the radar signals that are the subject of the present invention. Television signals are broadcast on continuous wave carriers. Radar pulses are short bursts of energy with long gaps in between. The steps involved in detecting

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and processing radar signals are substantially different from receiving and processing television and other communications signals.

Claims 1-9 were not rejected over the cited references, and applicant has amended the claims to correct the informalities noted by the Examiner, therefore these claims should now be in condition for allowance. Claims 10-25 have been similarly amended, and in view of the above arguments, and the amendment to the specification (Abstract) , applicant believes that the present claims and the pending application are in condition for allowance.. Applicant includes the fee authorization in the enclosed fee transmittal to charge for a 1-month extension of time for this Response.

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Respectfully submitted,

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